1.0 Connecting OpenGN to a PRO-2000

Attention: Before you begin, follow the instructions in LT-1113 "OpenGN Administrator's Guide" (available on http://www.mircom.com) to install OpenGN and configure the computer running OpenGN and the OpenGN Gateway.

Note: These instructions should be completed by someone familiar with configuring a PRO-2000. See LT-1012, the PRO-2000 Installation and Operation Manual (available on http://www.mircom.com).

You need:

- OGN-STE01-KIT Advantech Serial to Ethernet Converter
- Advantech software CD
- RJ-11 to DB9 adapter (part of the PRO-2000 kit)
- RJ-11 cable (part of the PRO-2000 kit)
- Ethernet cable (maximum 300')
- OpenGN version 3.4 or later
- OpenGN Gateway version 3.4 or later
- OpenGN license key
- PRO-2000 with firmware 5.51 or later
- PRO-2000_XML_Generator software
- FIRE-SCOPE PRO-2000 System Configurator

1.1 Overview

To connect OpenGN to a PRO-2000, you must:

1. Configure the PRO-2000
2. Generate the VDU File
3. Convert the VDU File to XML
4. Connect the PRO-2000 to the OpenGN Gateway with the OGN-STE01-KIT
5. Set the PRO-2000 to Communicate using Modbus
6. Configure the OGN-STE01-KIT
7. Set up the VCOM Driver
8. Import the XML file into OpenGN
9. Configure the OpenGN Gateway

Follow the instructions below to complete these steps.

1.2 Configure the PRO-2000

1. Connect the PRO-2000 to the computer and configure it with the PRO-2000 System Configurator.
2. In the Network tab of the Configurator, provide the following information.

Baud Rate	9600
PC/PLC	Select this option.
Dest. Address	Any number between 11 and 255.

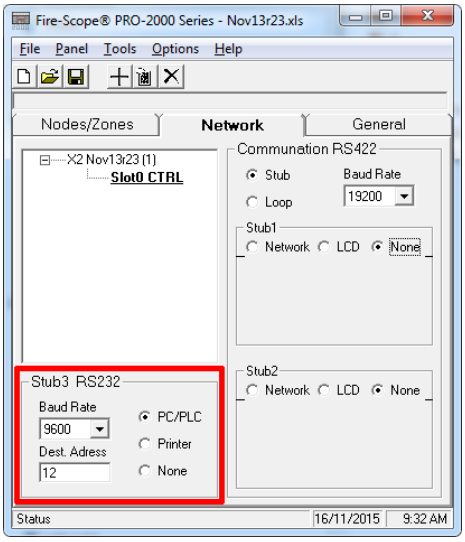

Figure 1 Network Tab of the Configurator

Note: Make a note of the **Dest. Address**. You will need it in a later step.

3. In the General tab of the Configurator, click **Generate Modbus Address**.
4. Make a note of the number beside **MODBUS maximum register**.

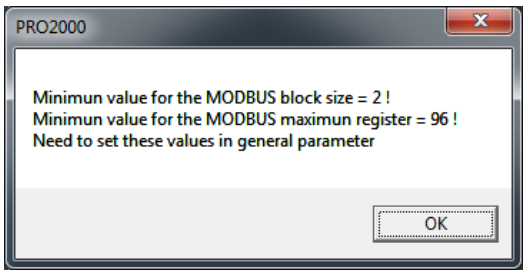

Figure 2 Modbus Maximum Register

5. Click **OK**.

6. Enter the number from step 4 in the **MODBUS Max Reg** field.

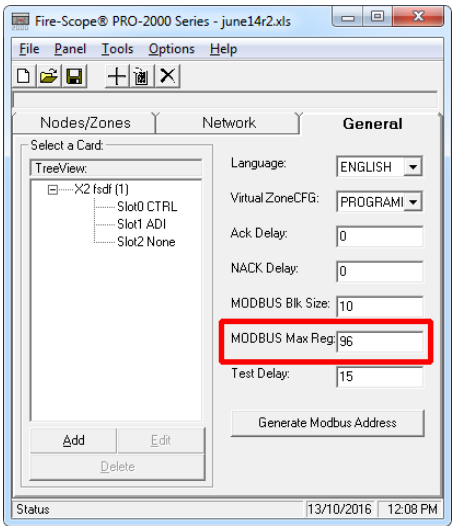

Figure 3 General tab

7. Send the configuration file to the panel.

1.3 Generate the VDU File

1. In the PRO-2000 Configurator, select **Tools**, then select **Generate VDU Generic File**.

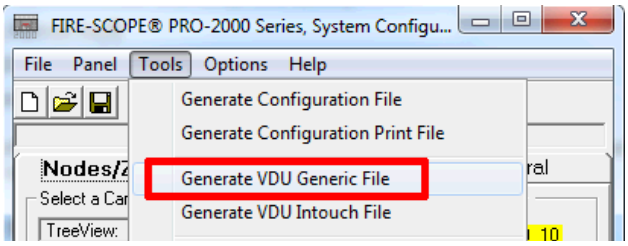

Figure 4 Generate VDU Generic File

The VDU file is saved in the same directory as your other configuration files. It is named **VDU_gen.csv**.

1.4 Convert the VDU File to XML

1. Copy the VDU file into the same folder as the **PRO-2000_XML_Generator** software.
2. Right-click the **PRO-2000_XML_Generator** icon, and then click **Run as Administrator**.
3. In the PRO-2000 XML Generator window that appears, provide the following information:

File Name	Enter a name for the XML file, or press Enter to use the job name that was set in the PRO-2000 Configurator. If the file already exists, the PRO-2000 XML Generator appends the date and time to the new file name.
Job ID Number	Enter a Job ID Number or press Enter to generate one automatically. If you are creating a new version of an existing job, use the same Job ID Number.
Job Version	Enter a Job Version number or press Enter to generate one automatically.
Job Name	Enter a Job Name or press Enter to use the job name that was set in the PRO-2000 Configurator.
Modbus Dest. Address	Enter the number that you entered for **Dest. Address** in the Network tab of the PRO-2000 Configurator (section 1.2 on page 2). **Note:** Keep a record of this number. You will need it in a later step.

4. Wait for the process to complete.
5. When the process is complete, press any key to continue.
6. Open the file **Job_Details.csv** and make a note of the numbers in the **JobID** and **JobVersion** columns. You will need these in a later step.

Note: Each time that you run the PRO-2000 XML Generator, it creates a new XML file and updates the **Job_Details.csv** file with the name of the XML file, the Job ID Number, and Job Version associated with that XML file.

1.5 Connect the PRO-2000 to the OpenGN Gateway with the OGN-STE01-KIT

1. Connect the RJ-11 to DB9 adapter to the COM port on the OGN-STE01-KIT.
2. Connect the RJ-11 cable to the same port on the PRO-2000 that you use for configuring the PRO-2000.
3. Connect the other end of the RJ-11 cable to the RJ-11 to DB9 adapter.
4. Use an Ethernet cable to connect the LAN port on the OGN-STE01-KIT to the computer running the OpenGN Gateway.
5. Connect the OGN-STE01-KIT to the power.

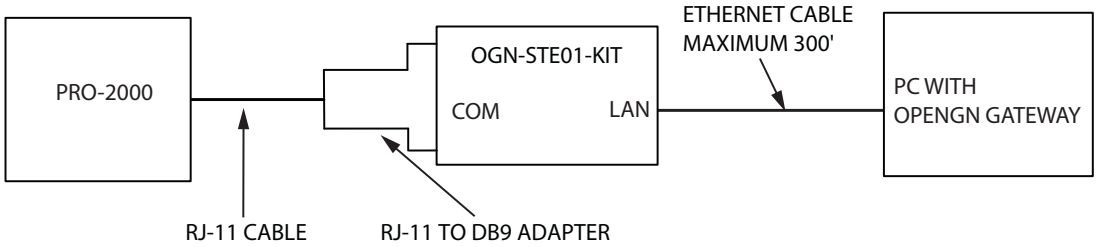

Figure 5 Connect the OGN-STE01-KIT to the OpenGN Gateway Computer

1.6 Set the PRO-2000 to Communicate using Modbus

On the PRO-2000 panel that is connected to the OGN-STE01-KIT, set the rotary switch SW1 to 3.

1.7 Configure the OGN-STE01-KIT

1.7.1 Configure the OpenGN Gateway Computer to Connect to the OGN-STE01-KIT

In order to initially connect to the OGN-STE01-KIT, the OpenGN Gateway computer must have a specific IP address.

1. On the computer that the OpenGN Gateway is on, click **Start**, then click **Settings**.
2. Click **Network and Internet**.
3. Click **Network and Sharing Center**.
4. Click the Ethernet connection.

The **Ethernet Status** window appears.

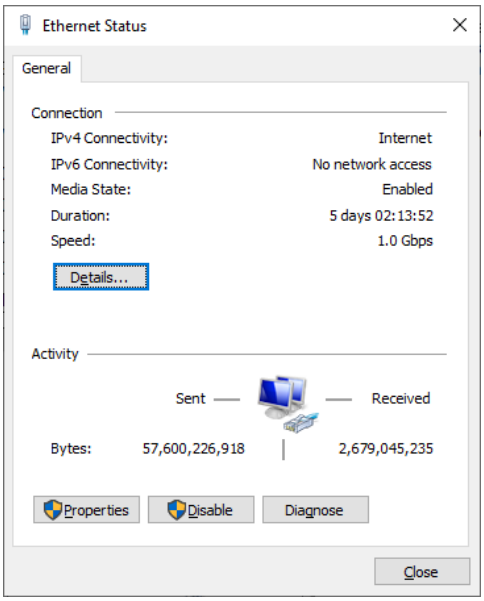

Figure 6 Ethernet Status

5. Click **Properties**.

   The **Ethernet Properties** window appears.

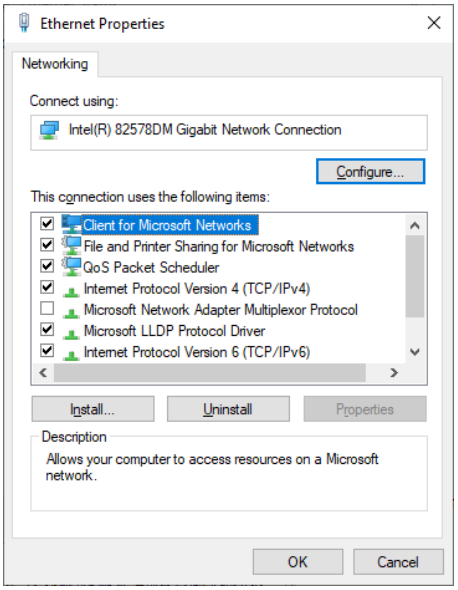

Figure 7 Ethernet Properties

6. Double-click **Internet Protocol Version 4 (TCP/IPv4)**.

The **Internet Protocol Version 4 (TCP/IPv4) Properties** window appears.

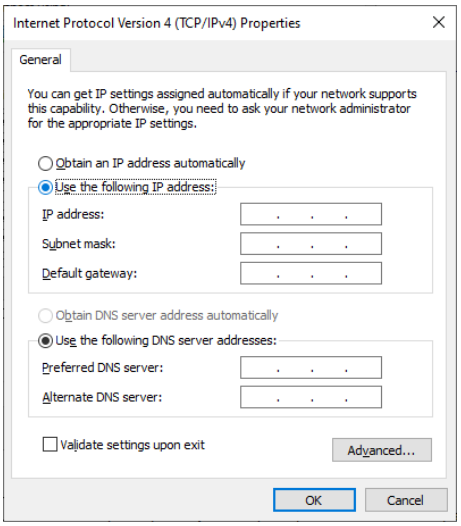

Figure 8 Internet Protocol Version 4 (TCP/IPv4) Properties

7. Click **Use the following IP address**.
8. Type the following addresses:
   - **IP address:** 169.254.102.40
   - **Subnet mask:** 255.255.0.0
6. Click **OK**.

1.7.2 Install the Vlinx Serial Server Manager

1. Insert the Advantech CD into the OpenGN Gateway computer.

   The Vlinx Serial Server Manager Installation Wizard starts automatically.

Figure 9 Welcome to the Vlinx Serial Server Manager Installation Wizard

2. Follow the instructions on the screen to install the Vlinx Serial Server Manager.

1.7.3 Configure the OGN-STE01-KIT

1. On the OpenGN Gateway computer, open the Serial Server Manager: click **Start** > **B&B Electronics** > **Vlinx** > **Vlinx Serial Server Manager**.

   The Vlinx Serial Server Manager appears.

Figure 10 Advantech Monitor Application

2. Click **I don't know the IP address of the device**.
3. Click **Connect**.

   The Vlinx Serial Server Manager looks for devices.

Figure 11 Advantech Device Details

The Login screen for the OGN-STE01-KIT device appears.

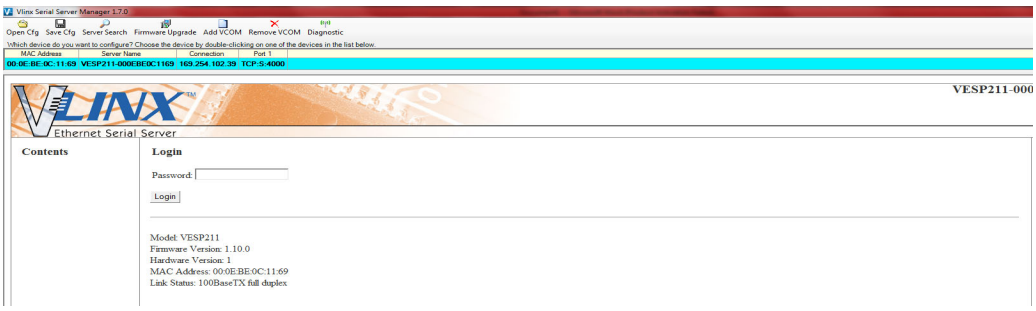

Figure 12 Login screen

4. Enter the Login password, then click **Login**. By default, the password is blank.

   The General screen appears.

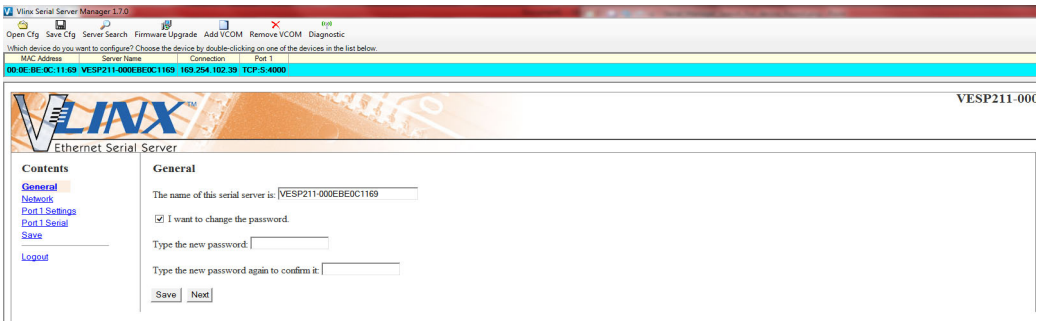

Figure 13 General screen

5. Enter a name that describes the panel that the device is connecting to, for instance **PRO-2000**.
6. Select **I want to change the password**, then enter the new password.
7. Click **Save**.

Note: Keep a record of the password. You will need it in a later step.

8. Click **Network** on the left sidebar.

   The Network screen appears.

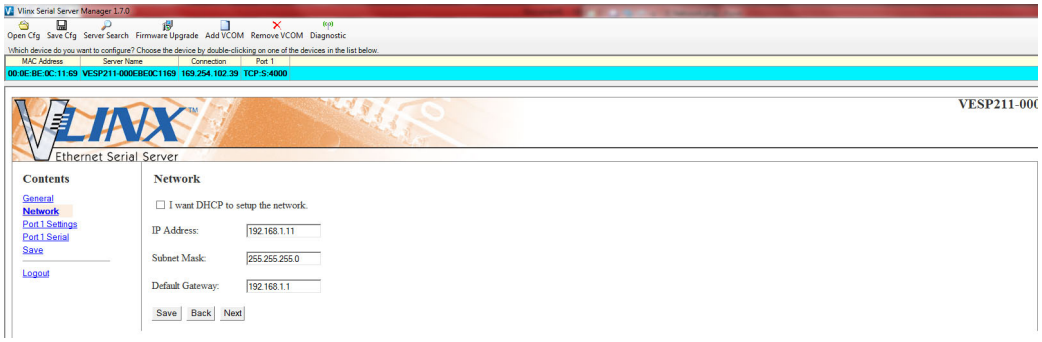

Figure 14 Network screen

9. Enter the following information:

IP address **Subnet Mask** **Default Gateway**	Consult your network administrator for assistance. The IP address must be in the same range as the IP address of the computer running the OpenGN Gateway. The gateway and subnet mask must be the same as they are on the OpenGN Gateway computer. For example, if the OpenGN Gateway computer's IP address and subnet mask are 192.168.1.10 and 255.255.255.0, then you can enter 192.168.1.11 and 255.255.255.0 as the OGN-STE01-KIT's IP address and subnet mask.

Note: Keep a record of the IP address. You will need it in a later step.

To ensure a constant connection to OpenGN, you must assign a static IP address to the OGN-STE01-KIT.

10. Click **Next**.

    The **Port 1 Settings** screen appears.

Figure 15 Port 1 Settings

11. Select **VCOM Mode**.
12. Click **Next**.

    The **Port 1 Serial** screen appears.

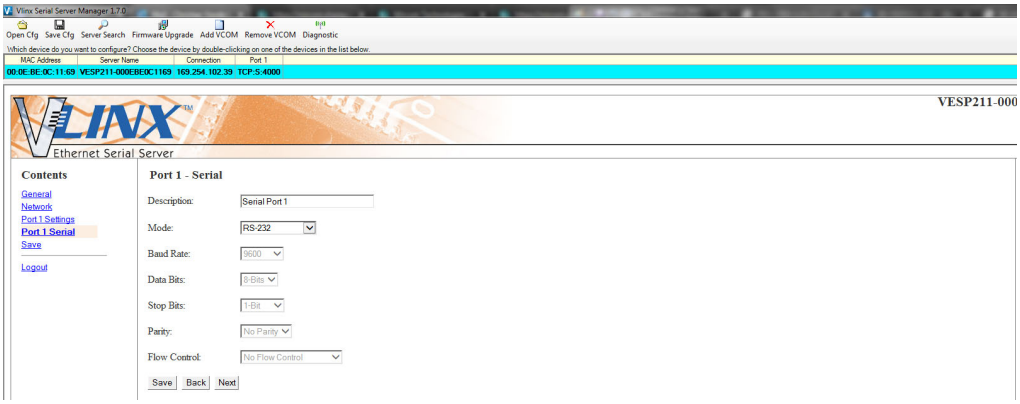

Figure 16 Port 1 Serial

13. Select **RS-232** in the Mode menu.
14. Click **Next**.
15. Under **Save**, click the **Save** button and wait for the Login screen to appear.

1.7.4 Configure the OpenGN Gateway Computer

- Change the IP settings for the OpenGN Gateway computer to their previous values. See section 1.7.1 on page 5 for instructions on how to change the IP settings.

  If you need assistance, contact your network administrator.

  If you are connecting the OpenGN Gateway computer to a PRO-2000 panel directly over Ethernet, enter an IP address that is different than the IP address of the PRO-2000 panel. Enter the same subnet mask as the subnet mask on the panel.

1.8 Set up the VCOM Driver

1. On the Login screen, click **Add VCOM**.

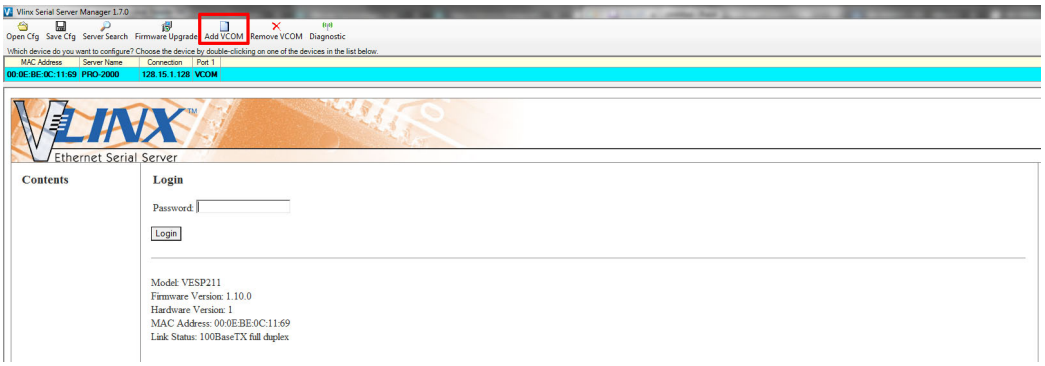

Figure 17 Add VCOM button

2. The Add VCOM window appears.

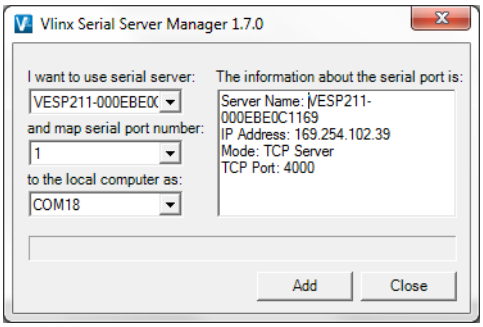

Figure 18 Add VCOM

3. Enter the following information:

I want to use a serial server:	Select the configured OGN-STE01-KIT Serial Server.
and map serial port number:	Select 1.
to the local computer as:	Select a COM port number.

Note: Keep a record of the COM port number. You will need it in a later step.

4. Click **Add**.

   A **Success** message should appear.

5. If there is an error

   a. Make sure the OGN-STE01-KIT is connected to the Ethernet cable.

   b. Try a different COM port number when adding the VCOM.

1.9 Import the XML file into OpenGN

1. Transfer the XML file you generated in section 1.4 on page 4 to the computer that OpenGN is running on.
2. Insert the OpenGN CodeMeter license key in the computer.
3. Double-click the **Open Graphic Navigator** icon.

   The Login window appears.

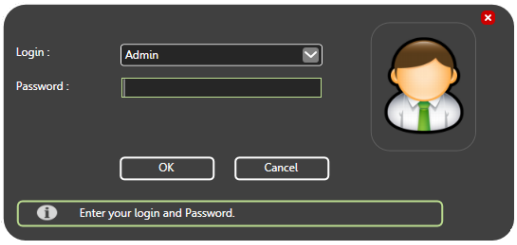

Figure 19 Login Window

4. Select the user from the **Login** menu.
5. Type the password.
6. Click **OK**.

   The OpenGN Main Display window appears.
7. Click the **Config** button from the Main Display window.
8. Click **Yes** to confirm that you want to enter the configuration section.

   The Configuration window appears.
9. Click the **Settings** button in the lower right-hand corner of the Configuration window.

   The Panel Settings window appears.

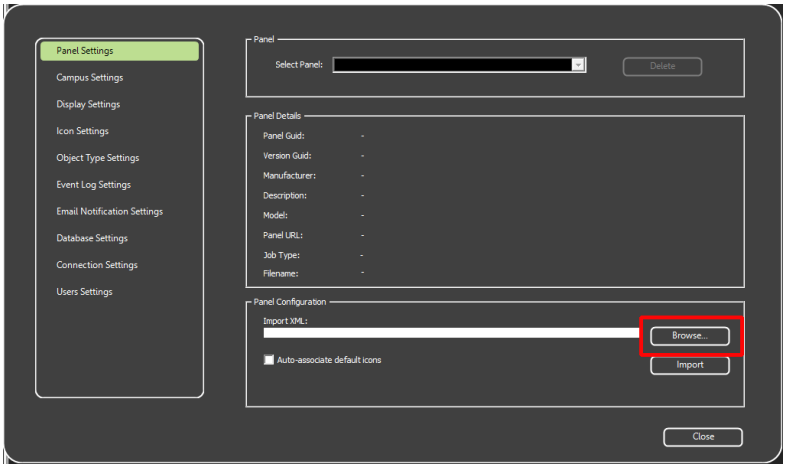

Figure 20 Panel Settings

10. Click **Browse** in the Panel Configuration section, and then navigate to the XML file.

11. Select **Auto-associate default icons** if you want to associate the object icons with the existing system icon images.

Note: If you are importing a new version of a previously imported job file, uncheck **Auto-associate default icons**. Otherwise, any custom icon settings you have made will be erased.

12. Click **Import XML**.
13. Click **Yes**.
14. Restart OpenGN.

1.10 Configure the OpenGN Gateway

1. Double-click the **Open Graphic Navigator Gateway** icon.

Figure 21 OpenGN Gateway

2. Click the **+** button. 

The Adapter Configuration window appears.

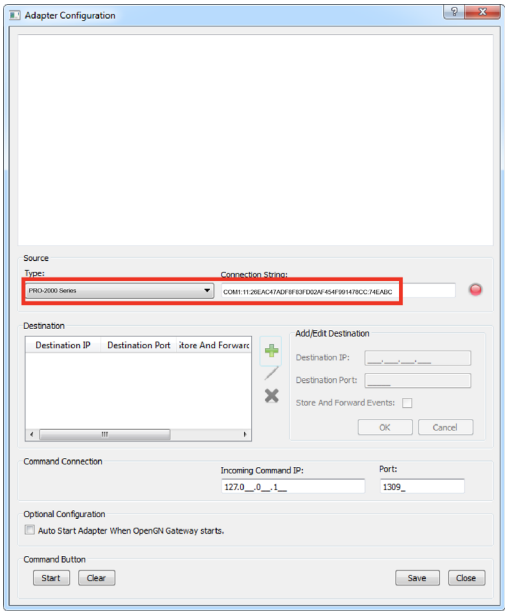

Figure 22 Adapter Configuration Window

3. Enter the following information.

Type	PRO-2000 Series
Connection String	The connection string consists of 8 pieces of information separated by colons. Change this string based on the information below:

COM1:<Node_Number>:<JobIDHere>:<Job_Version>:21,35000:100:20:30000

A : B : C : D : E,F : G : H: I

- **A**: The virtual COM port number from the VCOM driver (assigned in section 1.8 on page 11).
- **B**: The **Dest. Address** from the Network tab of the PRO-2000 Configurator (assigned in section 1.2 on page 2).
- **C**: The Job ID Number (assigned in section 1.4 on page 4).
- **D**: The Job Version (assigned in section 1.4 on page 4).
- **E**: Starting Modbus address. Leave as is.
- **F**: Modbus maximum register number from the General tab of the PRO-2000 Configurator (assigned in section 1.2 on page 2).

Note: Items **E** and **F** (the starting and ending Modbus addresses) must be separated by a comma.

- **G**: Number of addresses polled per read. Leave at **100**.
- **H**: Delay between read messages (in milliseconds). Leave at **20**.
- **I**: Delay to wait when No Response received (in milliseconds). Leave at **3000**.

4. Click the green button beside Destination, and then provide the following information:

Destination IP	The IP address of the OpenGN computer. If the OpenGN Gateway and OpenGN are on the same computer, use 127.0.0.1.
Destination Port	1209
Store and Forward Events	Reserved for future use.

5. Click **OK**.

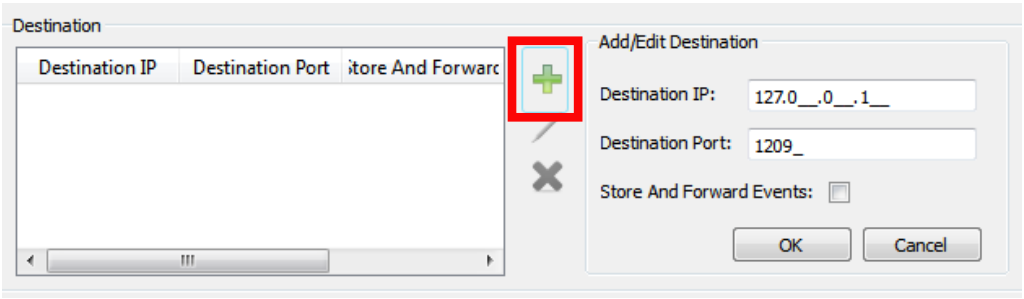

Figure 23 Destination

6. Click **Auto Start Adapter When OpenGN Gateway Starts** if you want the OpenGN Gateway to connect automatically with these settings when it starts.
7. Click **Save**.
8. Click **Close**.
9. Select the adapter you created, and then click the green arrow icon:

   When OpenGN is connected, the adapter in the Adapter List is green.

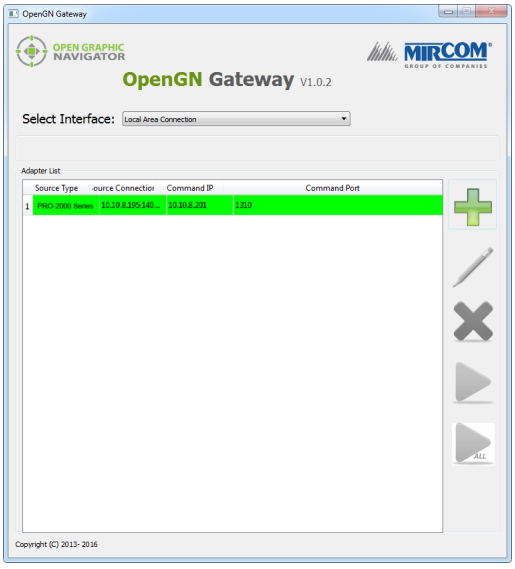

Figure 24 OpenGN Gateway with One Connection

10. Double-click the adapter to view its details.

When OpenGN is connected, the icon beside **Connection String** turns from red to green, and the Destination turns green.

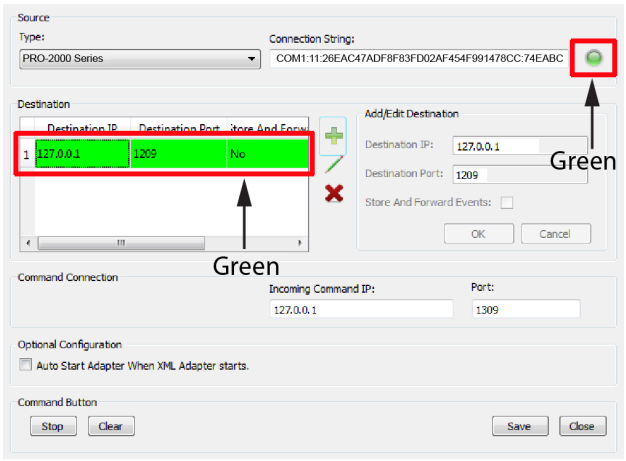

Figure 25 The OpenGN Gateway Showing a Connection

11. Start OpenGN.

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